IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1.   (Currently Amended) A method for creating or accessing a menu for audio content stored in a storage means, the content consisting of audio tracks, and the menu containing representations of said audio tracks, the method comprising

   - classifying the audio tracks into groups or clusters, wherein said classification is performed according to characteristic parameters of said audio tracks, wherein said characteristic parameters comprise physical features, perceptual features, and psychological features, wherein physical features comprise one or more of spectral centroid, short-time energy, or short-time average zero-crossing, and wherein perceptual features comprise one or more of rhythm and tonality;

   - detecting addition of a new audio track;

   - determining characteristic parameters of the new audio track;

   - determining that dissimilarity between the newly added track and existing clusters, according to said characteristic parameters used for classification, reaches at least a defined minimum level;

   - upon said determining, automatically creating a new, second cluster;

   - assigning the new audio track to said new, second cluster;

   - upon said creating the second cluster, classifying one or more further audio tracks of said audio tracks into the second cluster;

   - selecting automatically a first audio track as being a representative for the second cluster, wherein the medoid of the second cluster is selected;

   - automatically generating a reproducible audio extract from said first representative audio track; and

   - associating said audio extract as representative of the second cluster to a menu list.

2.   (Previously Presented) Method according to claim 1, wherein said characteristic parameters used for classification of audio content comprise one or more audio descriptors, the audio descriptors being either physical features, or perceptual features, or psychological or social features of the audio content.

3.   (Previously Presented) Method according to claim 1, wherein an audio track can be classified into more than one cluster.

4.   (Previously Presented) Method according to claim 1, wherein the audio tracks within a cluster have variable order, so that the user listens to a randomly selected track when having selected a cluster, with said track belonging to said cluster.

5.   (Previously Presented) Method according to claim 1, wherein a user can modify the result of automatic classification of audio tracks.

6.   (Previously Presented) Method according to claim 1, wherein a user can modify the classification rules for automatic classification of audio tracks.

7.   (Previously Presented) Method according to claim 1, wherein the actual audio data are clustered within said storage means according to said menu.

8.   (Previously Presented) Method according to claim 1, wherein the audio extract is a sample from the audio track.

9.   (Previously Presented) Method according to claim 1, wherein audio extracts are created additionally for audio tracks not being representatives of clusters.

10.   (Previously Presented) Method according to claim 1, wherein the length of audio extracts is not predetermined.

11.   (Previously Presented) Method according to claim 1, wherein one of said clusters has no representative track.

12.   (Previously Presented) Method according to claim 1, wherein said menu is hierarchical, such that a cluster may contain one or more subclusters.

13.   (Previously Presented) Method according to claim 1, wherein the classification rules are modified automatically if a defined precondition is detected, and a reclassification may be performed.

14.   (Previously Presented) Method according to claim 13, wherein said precondition comprises that the difference between the number of tracks in a cluster and the number of tracks in another cluster reaches a maximum limit value.

15.   (Previously Presented) Method according to claim 13, wherein said precondition comprises that all stored tracks were classified into one cluster, and the total number of tracks reaches a maximum limit value.

16.   (Currently Amended) An apparatus for creating or accessing a menu for audio content stored on a storage means, the content consisting of audio tracks, and the menu containing representations of audio tracks, the apparatus comprising
  -   means for classifying the audio tracks into groups or clusters, wherein said classification is performed according to characteristic parameters of said audio tracks;
  -   means for detecting addition of a new audio track;

- means for determining characteristic parameters of the new audio track, wherein said characteristic parameters comprise physical features, perceptual features, and psychological features, wherein physical features comprise one or more of spectral centroid, short-time energy, or short-time average zero-crossing, and wherein perceptual features comprise one or more of rhythm and tonality;

- means for determining that, according to said determined characteristic parameters, dissimilarity between the newly added track and existing clusters reaches at least a defined minimum level;

- means for automatically creating a new, second cluster upon said determining;

- means for assigning the new audio track to said new, second cluster;

- means for classifying one or more further audio tracks into the second cluster upon said second cluster being automatically created;

- means for selecting automatically a first audio track as being a representative for the second cluster, wherein the medoid of the second cluster is selected;

- means for automatically generating a reproducible audio extract from said first ~~representative~~ audio track; and

- means for associating said audio extract as representative of the second cluster to a menu list.

17. (Previously Presented) Apparatus according to claim 16, further comprising

- means for selecting and reproducing a first audio extract from the first cluster;

- means for a first user input, the input controlling whether the cluster associated with the currently selected audio thumbnail is selected or not; and

- means for a second user input, the input controlling whether another cluster is selected or not.

18.   (Previously Presented) Apparatus according to claim 16, further comprising means for reading an audio track of a selected cluster from said storage means for playback.

19.   (Previously Presented) Method according to claim 1, wherein the audio extract is an audio sequence being synthesized from the actual audio track rather than being an original sample.

20.   (Currently Amended) Method according to claim 1, <u>wherein said one or more further audio tracks classified into the second cluster were previously classified in a first cluster being a neighbour of the second cluster, the method</u> further comprising the steps of

-    selecting automatically a second audio track being a representative for the first cluster, wherein the medoid of the first cluster is selected;
-    automatically generating a reproducible new audio extract from the second audio track; and
-    associating said new audio extract of the second audio track as representative of the first cluster to the menu list.

21.   cancelled.

22.   (Currently amended) Method according to claim 1, wherein the <u>defined</u> minimum level ~~to which the detected number of tracks within said first cluster is compared~~ depends on the number of tracks in other existing clusters.

23.   (Currently Amended) Apparatus according to claim 16; <u>wherein said one or more further audio tracks classified into the second cluster were previously classified in a first cluster being a neighbour of the second cluster,</u> further comprising,

-    means for automatically selecting a second audio track being the medoid audio track of the first cluster;

- means for automatically generating a reproducible audio extract from said second audio track; and
- means for associating said audio extract generated from the second audio track as representative of the first cluster to the menu list.

24. (Previously Presented) Apparatus according to claim 16, wherein the means for assigning at least one of the audio tracks of said first cluster to the second cluster uses the K-means algorithm to decide which audio tracks are assigned to the second cluster.

25. cancelled.

26. (Currently amended) Method according to claim 20, wherein another audio track was a representative of the first cluster before the new audio track was added, and said first audio track being representative of the ~~first~~ second cluster is different from the ~~other~~ another audio track that was representative of the first cluster before the new audio track was added.

27. (Previously Presented) Method according to claim 3, wherein a track is classified into two clusters and both clusters contain a link to said track, and wherein the track is stored only once.

28. (New) Portable audio playback device without display, comprising
- a storage with stored audio tracks being clustered in a plurality of clusters;
- a navigation system having not more than three buttons, or one button with three button functions, wherein one button is for 'Switch to a Near Cluster', one button is for 'Switch to a Distant Cluster', and one button is for 'Switch to another track from the Current Cluster.